INTREPIDLynx—access for *ArcView*, *MapInfo* and *ERMapper* (T29)

Top

INTREPID provides extensive *ArcView* integration. This is based on the familiar *ERMapper*-style link technology used in the INTREPID processing system.

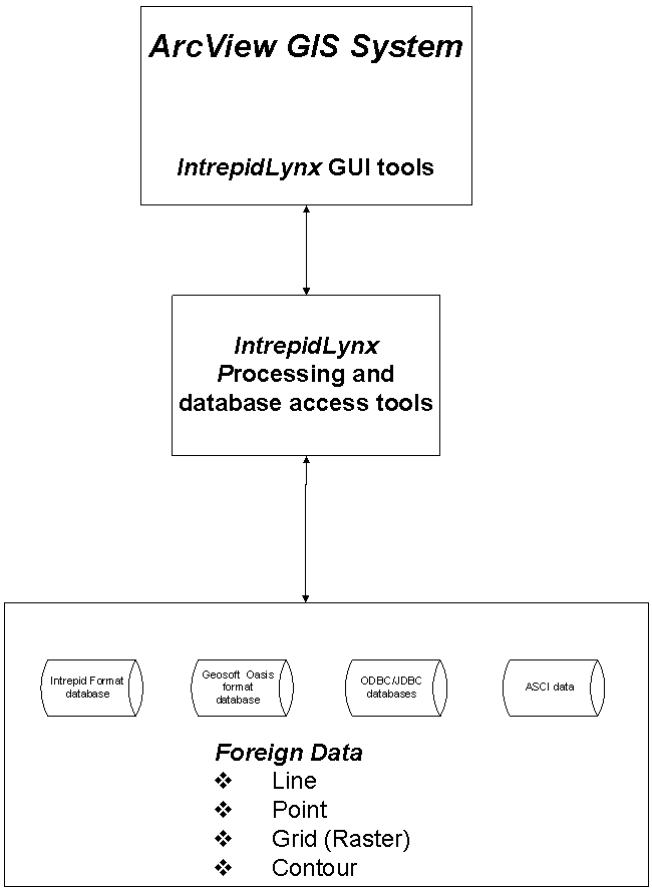
As well as using INTREPID format datasets, these tools work with *Geosoft OASIS* databases and any ODBC/JDBC compatible relational database such as *ORACLE* and *Access*. INTREPIDLynx also includes a powerful ASCII import facility.

For instructions about installing INTREPIDLynx, see "Installation notes for INTREPIDLynx" in INTREPID Installation guide (S05).

How does it work?

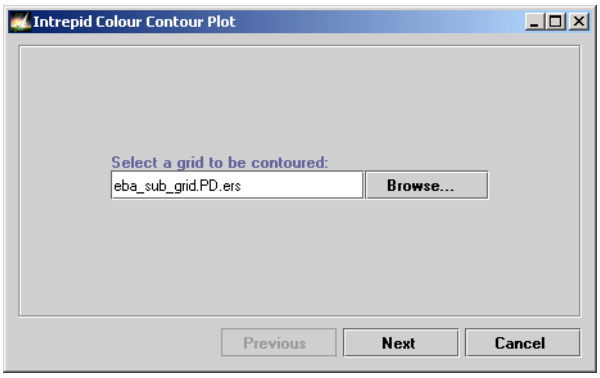
Basic Architecture

INTREPIDLynx has two parts. The first is a set of GUIs that run from an *ArcView* menu. The second is the INTREPIDLynx program, which accesses the underlying database, performs the processing operation and produces a Arc format "Shape" or "BIL" that is automatically loaded into an Arc "Theme".



What does the user see?

The user sees a *ArcView* pulldown menu that launches intuitive and easy to use "Wizards". The wizards walk a user through the process of selecting the data, configuring the process and performing optional steps.



What does INTREPIDLynx do?

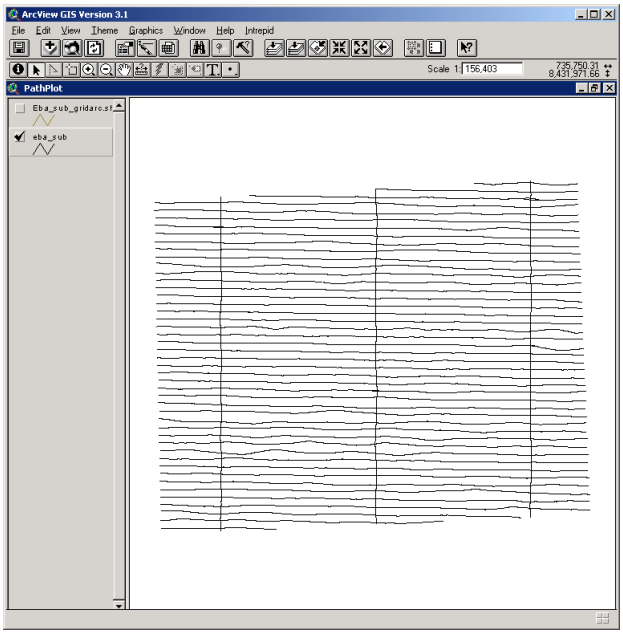
INTREPIDLynx makes it extremely easy to get a whole range of vector, point and raster data into *ArcView*.

INTREPIDLynx supports the following presentation types:

- Path Plots
- Contouring
- Stacked Profiles
- Point Plots
- Grid Import
- Grid filter (Fourier Domain)

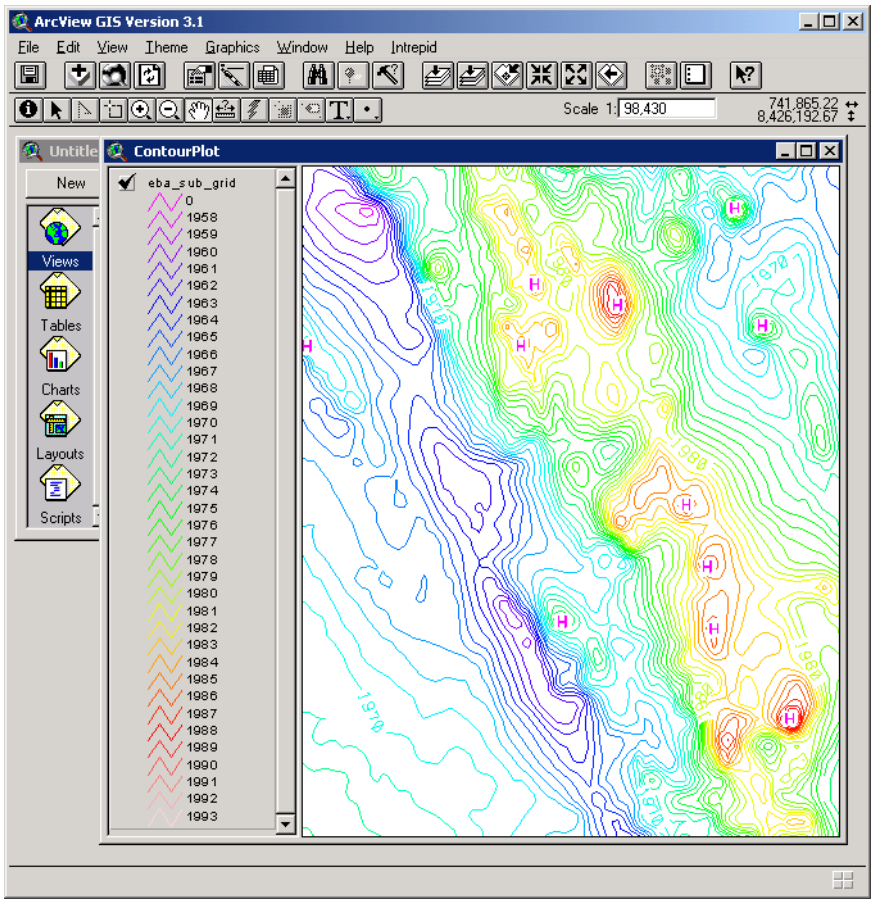
Path Plots

You can view typical ground, airborne and marine acquisition data spatially. If required, you can colour code the paths using a dataset field (such as magnetometer reading or date) using associated colours and a legend.



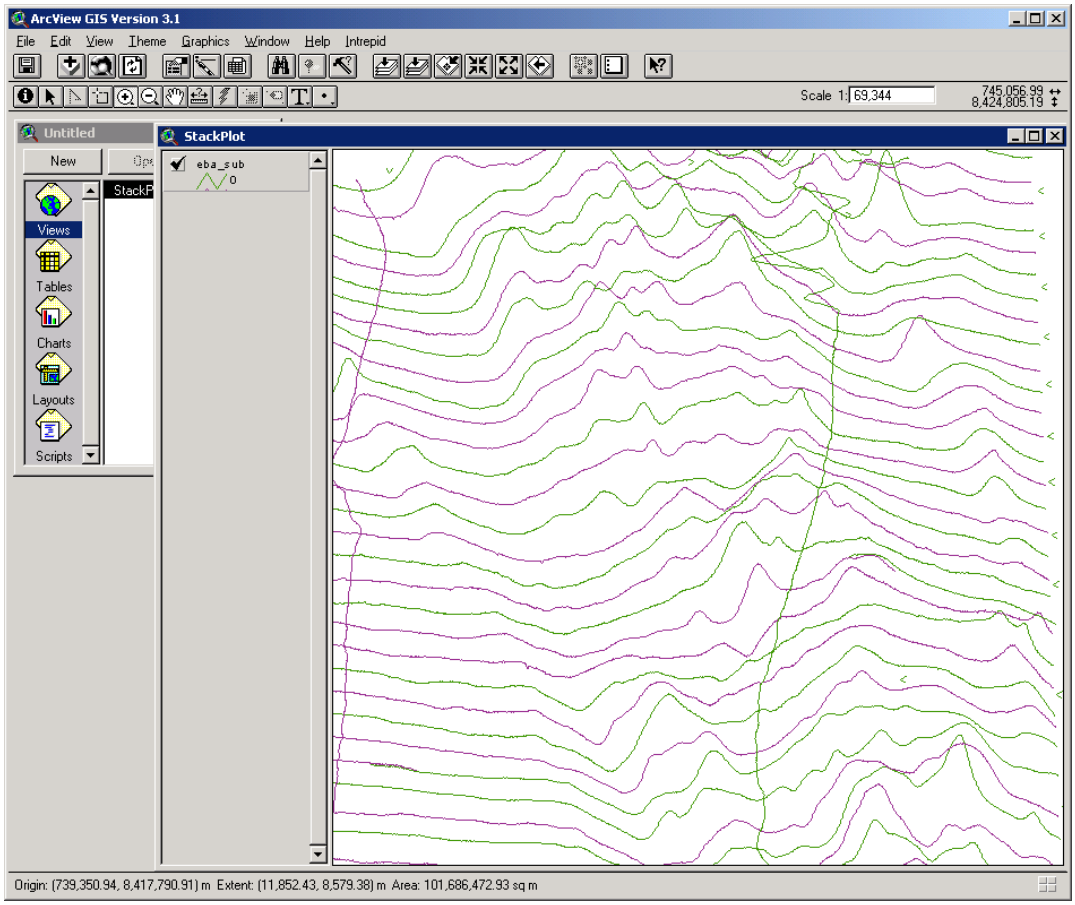
Contouring

You can contour a grid in *ERMapper* foramt. You can easily apply extensive annotation and control. The size of the grid is only limited by machine resources.



Stacked Profiles

Stacked Profiles present data spatially in plan view (like Path Plot) but also allow the selected signal field to modulate the line.



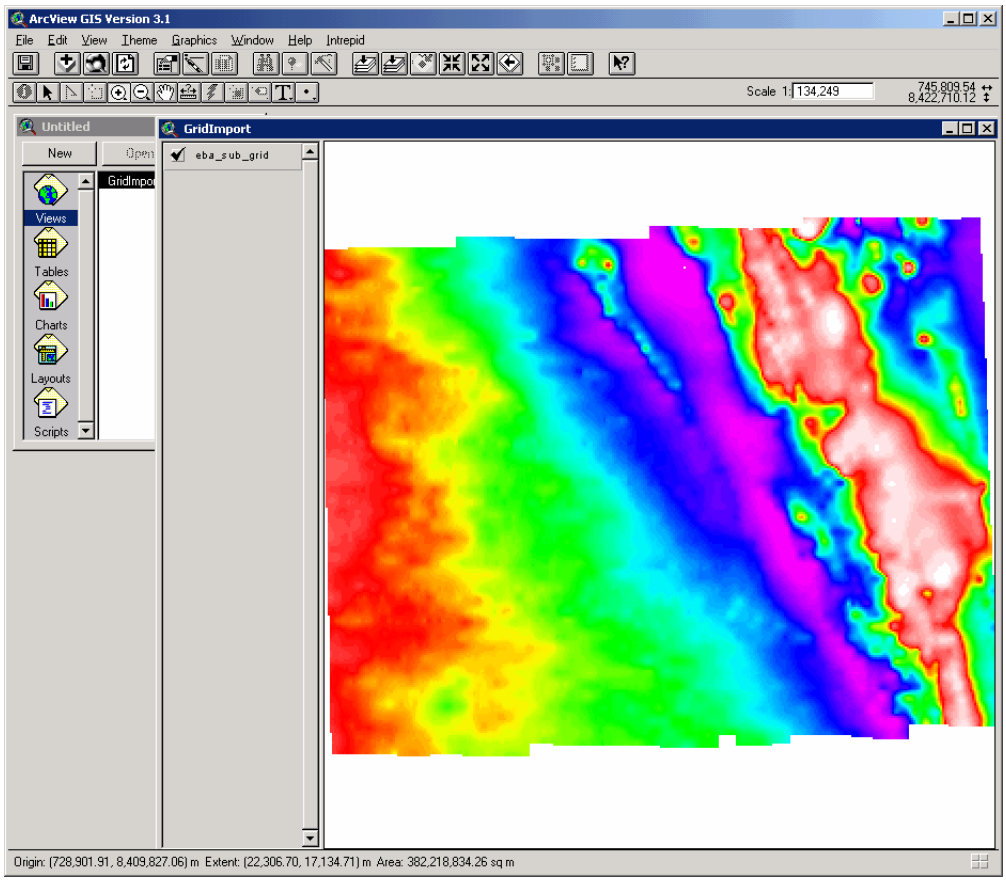
Point Plots

INTREPID has powerful Interpretation tools. In many cases, the outputs from these tools (for example, Euler deconvolution and Naudy auto modeler) are in the form of a point dataset. Each x,y point has a number of values associated with it. For example, Naudy attributes include Depth, Dip, and Strike.

The INTREPIDLynx Point Plot tool allows you to view such datasets in *ArcView*.

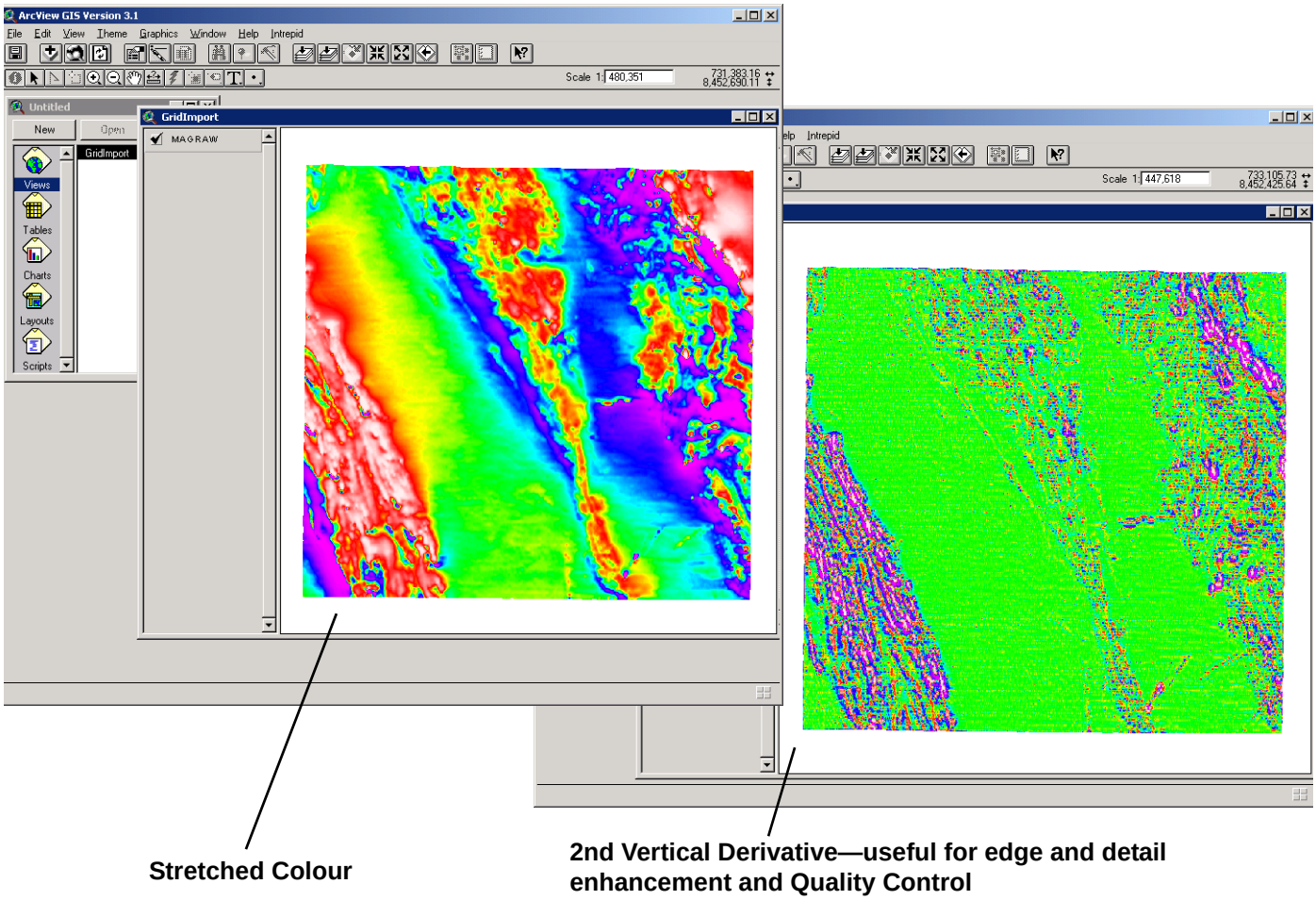
Grid Import

The INTREPIDLynx grid import tool provides an easy way to import *ERMapper* (INTREPID) format grids. The process enables you to equalise and stretch grids and assign colour tables.



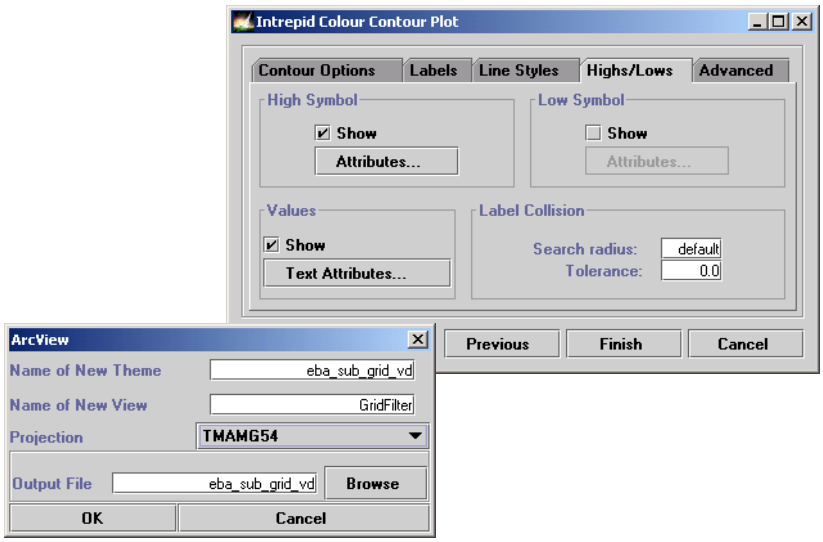
Grid filter (Fourier Domain)

INTREPIDLynx enables you to apply Fourier operations *ERMapper* (INTREPID) format grids. You can simply enhance grids using filters such as vertical derivative, reduction to poles and frequency-based filters.



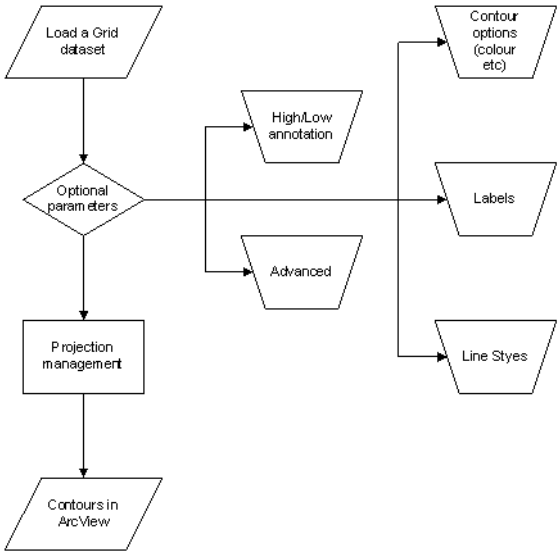
INTREPIDLynx Contours

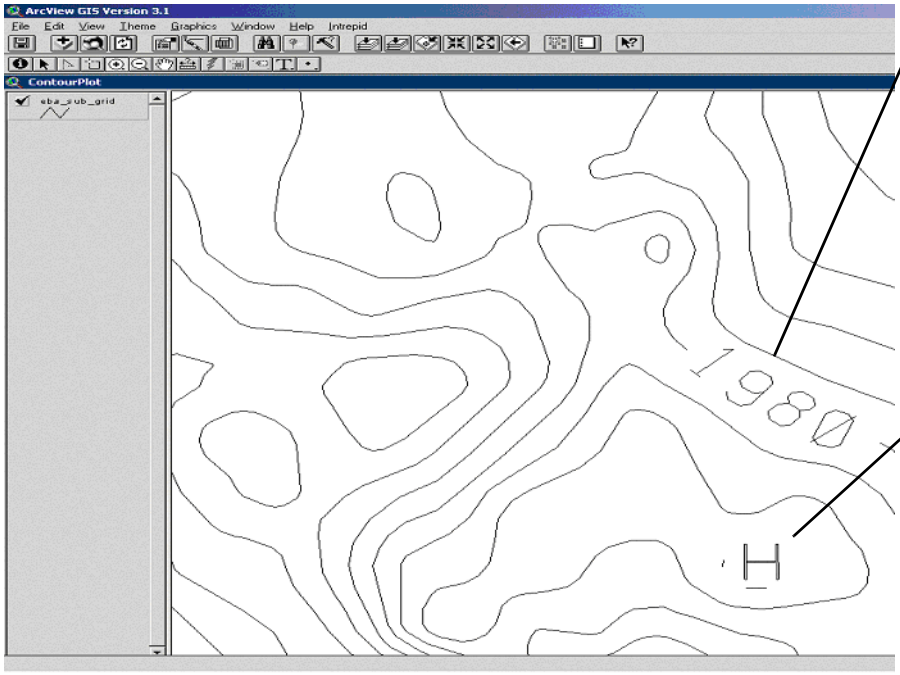
INTREPIDLynx contours provide exceptional quality and versatility and the capability to process grids whose size is limited by available machine resources.



INTREPIDLynx contours include the following features:

- Colour contours
- Configutable intervals for both the main contour and optional bold contours
- Configurable contour labels for either normal or bold contours
- Line styles, including:
  - Variable colour (from cell values in source grid)
  - Colours for normal and bold contour intervals
  - Line thickness

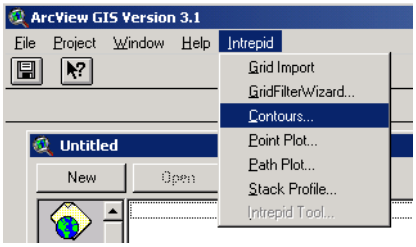




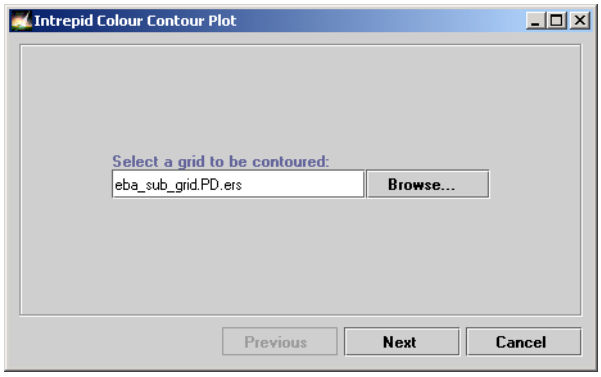
>> *To create contours (overview)*

1 Load a Grid dataset

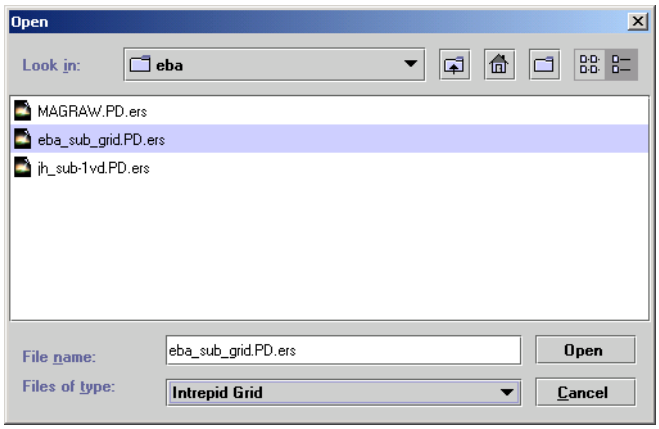
2 Select Contours from the Intrepid menu in *ArcView*



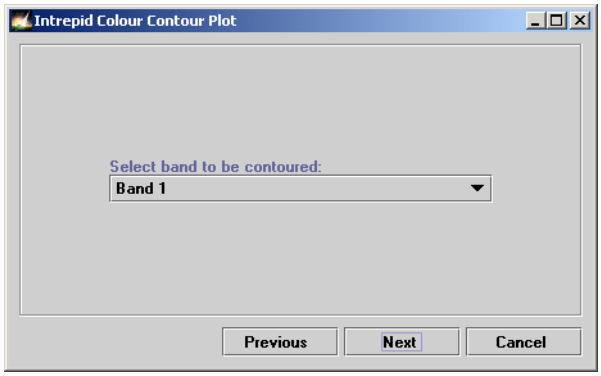
3 Select (enter the full name, including extension) or browse for the input grid.



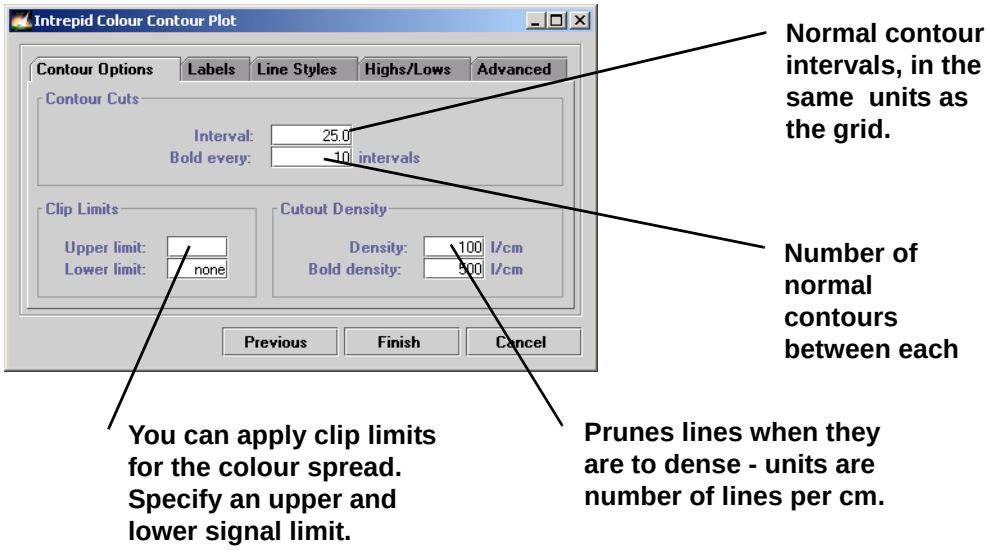
4 Browse for the input grid.



5 Select the band (if it is a multiband grid)



Contour Options



The contour options tabs enable you to select the contouring parameters and the presentation style:

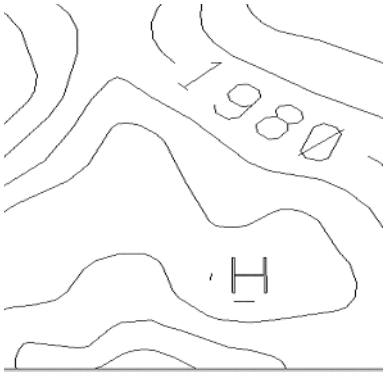
- The clip limits for the selected band are automatically read from the grid file. You can override these if necessary.
- Enter the contour interval as required. INTREPIDLynx bolds each 10th interval unless you specify otherwise.
- INTREPIDLynx displays the contours in a single colour unless you specify otherwise.
- To create coloured contours select the **Line Style** tab and then check **Colour Contours**.
- Only *ERMapper* format **LUT** files are supported. The colours for the contours will be assigned using the *ERMapper* colour table. These colours should match the colours when the same colour table is used in *ERMapper*. The colours are assigned from low to high contour value. The lowest contour value gets the lowest colour, the highest contour value the highest colour.

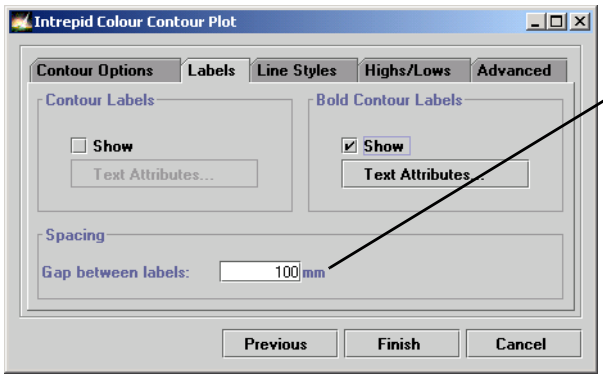
Choose **Finish** when ready. The INTREPID Contouring tool generates the contours.

When the contours are ready they appear in the current or a new window using the style you have chosen.

Contour labels

Contour labels attach the numeric value of the contour to it. It is normal practice to only use labels on bold contours.



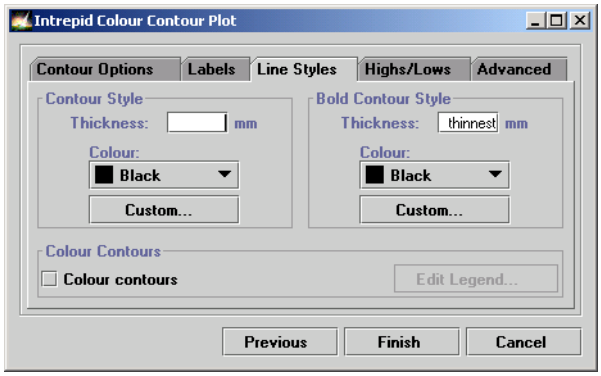


Distance between labels on each contour line.

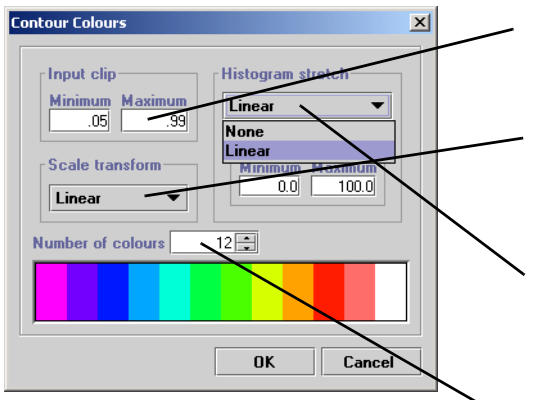
Line Styles

Line style enable you to specify:

- Colour
- Thickness
- Colour by cell value in original grid



If you select colour contours, you can alter the number and distribution of the colour map if required.



Removes outliers

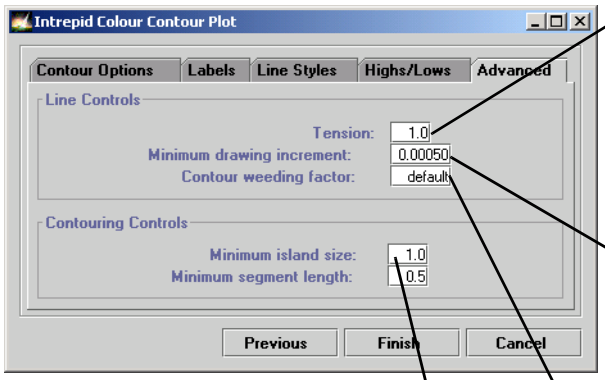
Transfers the input data range

Re-bins the output data

Allows users to select and set the number of colours and hence the number of entries in the legend.

Advanced

The advanced options enble detailed control over such things as drawing parameters. Normally the defaults are satisfactory.



Tension increases the tensions on the imaginary "springy string" hooked on the cell values. Increasing this makes the contours more angular and reduces

Minimum drawing increment is the length of the individual lines drawn to make up the contour.

Controls the number and size of small unattached contours

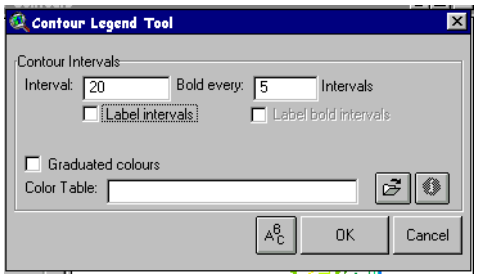
Contour weeding

Changing the contour display style

After creating the contour files you can change the style without having to re-run INTREPID. This is because the display style is managed inside *ArcView* using the attributes from the contour file.

Select the contour theme in the view and choose **Intrepid > Contour Legend**. You can change the contour display options to suit your needs without recreating the contours.

Note: You must enter the contour interval matching the theme. You cannot specify a different contour interval. To change the interval you need to create the contours again from scratch.



Using existing contour files

You can apply the previous contour legend option to contours that you have previously created with the tool.

Add the contour theme to your view and choose **Contour Legend** from the **Intrepid** menu.

Sending the contour files to another user

The contours that INTREPIDLynx creates are in standard *ArcView* shapefile format. This enables you to easily send these files to another *ArcView* user who doesn't have INTREPID.

The default file name of the contour file is *GRIDNAME_BANDNAME_INTERVAL*_**arc.***xxx* where :

Filename component	Purpose
GRIDNAME	name of the contoured grid file
BANDNAME	band that was contoured
INTERVAL	contour interval
_arc	always appended by INTREPID
xxx	substituted by the *ArcView* shape file extensions **SHP**, **SHX** & **DBF**

Three files are created—you must send all three

GRIDNAME_BANDNAME_INTERVAL_arc.SHP
GRIDNAME_BANDNAME_INTERVAL_arc.SHX
GRIDNAME_BANDNAME_INTERVAL_arc.DBF

When creating the contours you can override the default file name.

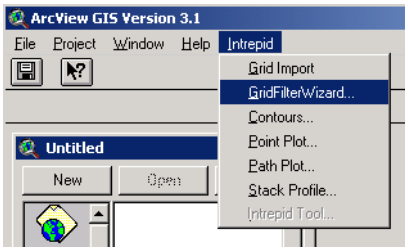
The default destination for the files is in the same directory as the grid file.

A **.MAP** file is also created using the same naming convention. This file contains the parameters that were sent to INTREPID to create the contours. This file is not needed. It is for reference purposes only and you can delete it.

The style (colours, line thickness etc.) are not automatically saved. These are normally saved with your *ArcView* project. If you want to send the style information to another user then save the legend associated with the contour theme. Double click the theme to bring up the **Legend** window. This enables you save the legend to an **.AVL** file. Another *ArcView* user can use this file to re-create the colour and styles you selected without having INTREPID on their system.

When sending the file put them into a **.zip** file to save space. Remember to include the **.SHP**, **.SHX** & **.DBF** files, and optionally a **.AVL** legend file.

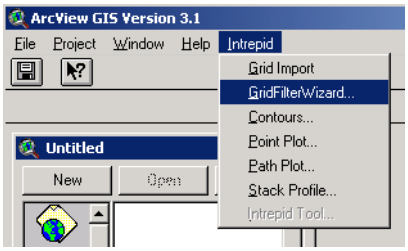
INTREPID Grid filter wizard



You can aply INTREPID grid filters to your data. See Spectral domain grid filters (GridFFT) wizard (T39) for details about this tool.

Grid Import

This tool enables you to convert *ERMapper* (INTREPID) grids to *ArcView* BIL format and apply stretches.



Frequently asked questions

Q : Using INTREPIDLynx to plot point symbols, is it possible to change the size of the plotted symbols, or define a different symbol size for a given depth range?

You can't do this interactively, but you can edit the ***install_path*/lut/MarkerSize/default.leg** file. Changing the settings in this legend file will alter the point plot symbol sizes.

Q : When I use INTREPIDLynx, INTREPID writes a job file to the ***install_path*/algorithm** *subdirectory. Can I change this default location?

This file location, along with several others, are configurable. Look in ***install_path*/config/install.cfg**. You can edit this file and change **algorithmDir** to point to wherever you want the file to be written.